

Briefly stated, the present invention provides a changer-equipped disc player that uses a number n of carriages to hold up to a number n of discs in storage positions in a stocker. These carriages carry discs between the stocker and a movable tray for play and for loading and unloading. One of the n number of carriages, carriage S , is usable in a single play mode, allowing the player to be used as a tray equipped single-play device. Carriage S may be selected for single play regardless of the number of discs stored in the remaining $n-1$ number of carriages. The remaining $n-1$ number of carriages are usable only in changer-play operation. Loading discs into the device is accomplished by placing discs into empty carriages as each is held in the tray in an eject position. The stocker is not removed for loading discs or for removing or replacing the discs stored within it. During changer-playback operation, the device selects and plays all stored discs in a predetermined sequence. During single-play operation, the device plays only the disc in carriage S .

According to an embodiment of the invention, there is provided a changer-type disc player comprising: an n number of carriages, a tray capable of receiving one of the n numbers of carriages thereto and ejecting it therefrom, each of the carriages for supporting a disc thereon, means for moving the tray with one of the carriages therein between a first and a second position, the first position being an eject position extending external to the changer-type disc player, the second position being a load position within the changer-type disc player, a stocker disposed in the changer-type disc player, the stocker having therewithin an n number of slots, each of the n number of slots for storing therein and dispensing therefrom a corresponding one, of the n numbers of carriages, means for moving the stocker among an n number of positions so that each of the slots is levelable with the tray in the load position, means for moving one of the n number of carriages between the tray in the load position and a corresponding one of the slots in the stocker brought level with the tray, a disc playing means for playing the disc in the tray in the load position, means for affixing the disc in the tray to the disc playing means, means, to be operated manually, for operating the stocker, means for controlling, responsive to the means for operating the stocker, controlling the means for moving one of n number of the carriages in the tray to the corresponding one of the slots in the stocker, means for controlling, responsive to the means for operating the stocker, moving a selected one of the n number of carriages not supporting a disc in the stocker to the tray in the load position, and means for controlling, responsive to the means for operating the stocker, moving the tray to the eject position according to the means for operating the stocker.

According to a feature of the invention, there is provided a changer-type disc player comprising: an n number of carriages including a carriage S for a single-play mode and a first to $n-1^{th}$ carriages for a changer-play mode, a tray capable of receiving one of the n number of carriages thereto and ejecting it therefrom, each of the n number of carriages for supporting a disc thereon, means for moving the tray with one of the n number of carriages therein between a first and a second position, the first position being an eject position extending external to the changer-type disc player, the second position being a load position within the changer-type disc player, a stocker disposed in the changer-type disc player, the stocker having therewithin an n number of slots, each of the n number of slots for storing therein and dispensing therefrom a corresponding one of the n number of carriages, means for moving the stocker among an n number of positions so that each of the slots is levelable with

the tray in the load position, means for moving one of the n number of carriages between the tray in the load position and a corresponding one of the slots in the stocker brought level with the tray, a disc playing means for playing the disc in the tray in the load position, means for affixing the disc in the tray to the disc playing means, means, operable manually, for operating the stocker, means for controlling, responsive to the means for operating the stocker, moving one of the n number of carriages in the tray to the corresponding one of the slots in the stocker, means for controlling, responsive to the means for operating the stocker, moving a selected one of the first to $n-1^{th}$ carriages, not supporting the disc, into the slot in the tray, and means for controlling, responsive to the means for operating the stocker, moving the tray to the eject position.

According to a feature of the invention, there is provided a changer-type disc player comprising: an n number of carriages, a tray capable of receiving one of the n numbers of carriages thereto and ejecting it therefrom, each of the n number of carriages for supporting a disc, thereon, means for moving the tray with one of the n number of carriages therein between a first and a second position, the first position being an eject position extending external to the changer-type disc player, the second position being a load position within the changer-type disc player, a stocker disposed in the changer-type disc player, the stocker having therewithin an n number of slots, each of the n number of slots being available for storing therein and dispensing therefrom a corresponding one of the n number of carriages therein, means for moving the stocker among an n number of positions so that each of the slots is levelable with the tray in the load position, means for moving one of the n number of carriages between the tray in the load position and a corresponding one of the slots brought level with the tray, a disc playing means for playing the disc supported in one of the n number of carriages received in the tray in the load position means for attaching the disc in the tray at the load position to the disc playing means, a manually operated eject/load control, means, responsive to operation of the eject/load control, for controlling the means for moving the tray between the eject position and the load position, the means for controlling being responsive to operation of the eject/load control with one the n number carriages in the tray at the eject position empty, being operative to perform the following functions: moving the tray to the load position, moving one of the n number of carriages in the tray into the stocker, moving a carriage whereon a disc is supported from the stocker the tray, and attaching the disc in the tray to the disc playing means.

According to a further feature of the invention, there is provided a changer-type disc player comprising: an n number of carriages, including a single-play mode carriage S and changer-play mode first to $n-1^{th}$ carriages, a tray capable of receiving one of the carriages thereto and ejecting it therefrom, each of the n number of carriages including means for supporting a disc thereon, means for moving the tray with one of the n number of carriages therein between a first and a second position, the first position being an eject position external to the changer-type disc player, the second position being a load position within the changer-type disc player, a stocker disposed in the changer-type disc player, the stocker having therewithin an n number of slots, each of the slots being available for storing therein and dispensing therefrom a corresponding one of the n number of carriages, means for moving the stocker among an n numbers of positions at which each of the slots is levelable with the tray in the load position, means for moving one of the n numbers